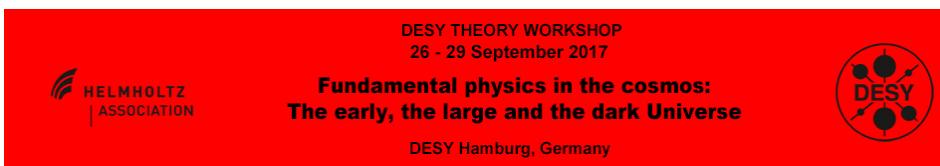


Fundamental physics in the cosmos: The early, the large and the dark Universe



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Primordial black hole constraints for extended mass functions

Thursday 28 September 2017 16:22 (17 minutes)

I will discuss the cosmological and astrophysical constraints on the fraction of the dark matter in primordial black holes (PBHs). First, I will describe a general method for extracting constraints for extended PBH mass functions from those for monochromatic ones, demonstrating that the constraints become more stringent in the extended case than the monochromatic one [1]. Then, I will discuss the production of PBH binaries and the projected constraints on PBH abundance from non-detection of the resulting stochastic gravitational wave background [2].

[1] B. Carr, M. Raidal, T. Tenkanen, V. Vaskonen and H. Veermäe, arXiv:1705.05567.

[2] M. Raidal, V. Vaskonen and H. Veermäe, arXiv:1707.01480.

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